

REMARKS

Applicant has studied the Office Action dated May 9, 2008. Claims 41-81, 96 and 99-104 are pending, with claims 41-68 having been previously withdrawn from consideration in response to a Restriction Requirement and claims 99-104 having been withdrawn by the Examiner in the present Office Action. Claims 69-81 and 96 have been amended and claims 82-95, 97 and 98 have been canceled without prejudice. Claims 41, 62, 69, 96, 99 and 100 are independent claims. No new matter has been added as the amendments have support in the specification as originally filed.

It is submitted that the application, as amended, is in condition for allowance. Reconsideration and reexamination are respectfully requested.

Claim for Foreign Priority under 35 U.S.C. § 119

The Examiner acknowledged the Applicant's claim for foreign priority under 35 U.S.C. § 119 in the previous Restriction Requirement issued February 5, 2008 and indicated that a certified copy of the priority document had been received.

Amendments to the Claims

Claims 70-81 have been amended to correct typographical or grammatical errors or to more clearly disclose the invention. It is respectfully submitted that the amendments have support in the application as originally filed and are not related to patentability.

Objections to Claims

The Examiner objected to claim 91 due to informalities. Specifically, the Examiner asserted the phrase "A bytes" at lines 1-2 should be "C bytes."

With this paper, claim 91 has been canceled without prejudice. It is, therefore, respectfully submitted that the rejection of claim 91 is moot and it is respectfully requested that the Examiner withdraw the objection.

§ 102 Rejections

Claims 69-71, 73-75, 79, 80, 82-86, 88, 90-93 and 95-98 were rejected under 35 U.S.C. § 102(e) as being anticipated by Knutson et al. ("Knutson" U.S. Patent No. 6,788,710). Applicant respectfully disagrees with the Examiner's interpretation of Knutson and respectfully traverses the rejection.

It is respectfully noted that a proper rejection for anticipation under § 102 requires complete identity of invention. The claimed invention, including each element thereof as recited in the claims, must be disclosed or embodied, either expressly or inherently, in a single reference. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991); Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1369, 21 U.S.P.Q.2d 1321, 1328 (Fed. Cir. 1991).

With this paper, claims 82-86, 88, 90-93, 95, 97 and 98 have been canceled without prejudice. It is, therefore, respectfully submitted that the rejection is moot with respect to claims 82-86, 88, 90-93, 95, 97 and 98 and it is respectfully requested that the rejection be withdrawn.

It is respectfully noted that the present invention is directed to periodically inserting predefined sequences into supplemental data in order to enhance ghost cancellation performance regardless of the length of the supplemental data. See page 14, line 21 to page 15, line 18 and FIG. 5 of present application as originally filed.

It is respectfully noted that independent claims 69 and 96 have been amended with this paper to better disclose the present invention to recite coding supplemental data for first forward error correction (FEC), periodically inserting predefined sequences into the FEC-coded supplemental data and the predefined sequences are used to enhance ghost cancellation performance of the supplemental data in a channel equalizer of the DTV receiver. It is respectfully submitted that Knutson fails to teach these limitations.

It is respectfully noted the Examiner, at paragraph 5 on page 3 with respect to independent claim 69 and page 5 with respect to independent claim 96, cites c. 6, II. 35-45 and FIG. 8 elements 82 and 86 of Knutson as disclosing "a plurality of expanded supplemental data segments based on a plurality of null bits, each expanded supplemental data segment comprising M expanded supplemental data bytes, wherein the plurality of null bits are inserted at predetermined positions within the expanded

supplemental data segments.” It is respectfully submitted that Knutson merely teaches simple padding that is not analogous to the periodic insertion of the null sequence, as recited in independent claims 69 and 96.

It is respectfully noted that the disclosure at c.6, ll. 35-45 of Knutson is clearly that “no null packets are generated” if “the auxiliary data is longer than one packet” and to “pad the remaining bits with null data” if “the auxiliary data is shorter than one packet.” It is respectfully submitted that the disclosure at c.6, ll. 35-45 of Knutson is not periodic null data insertion as there is nothing periodic about the basis for padding in Knutson.

It is respectfully submitted that a thorough reading of Knutson fails to identify any disclosure of coding supplemental data for first forward error correction (FEC) nor of any periodic padding of such coded supplemental data with null bits. It is respectfully noted that the auxiliary data multiplexer 32 shown in FIGS. 3, 4 and 5 of Knutson merely multiplexes the recorded packets with auxiliary data or null data provided to RS encoder 10 shown in FIGS. 1 and 2 of Knutson. Therefore, it is respectfully submitted that Knutson fails to disclose coding supplemental data for first forward error correction (FEC) and periodically inserting predefined sequences into the FEC-coded supplemental data, as recited in independent claims 69 and 96.

Notwithstanding that Knutson fails to disclose periodically inserting predefined sequences into FEC-coded supplemental data, it is respectfully submitted that even if the simple padding disclosed in Knutson were assumed to be analogous to periodically inserting predefined sequences into FEC-coded supplemental data, there is no disclosure in Knutson that the padding is used to enhance ghost cancellation performance of supplemental data in a channel equalizer of a DTV receiver, as the predefined sequences in independent claims 69 and 96 are recited as being used for. Therefore, it is further respectfully submitted that Knutson fails to disclose that the predefined sequences are used to enhance ghost cancellation performance of the supplemental data in a channel equalizer of the DTV receiver, as recited in independent claims 69 and 96.

It is respectfully asserted that independent claims 69 and 96 are allowable over the cited reference. It is further respectfully asserted that claims 70, 71, 73-75, 79 and 80 also are allowable over the cited reference at least by virtue of their dependence from allowable claim 69.

§ 103 Rejections

Claims 81, 87 and 94 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Knutson. This rejection is respectfully traversed.

It is respectfully noted that the Federal Circuit has provided that an Examiner must establish a case of prima facie obviousness. Otherwise the rejection is incorrect and must be overturned. As the court recently stated in In re Rijkaert, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993):

"In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. 'A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.' If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned." (citations omitted.)

With this paper, claims 87 and 94 have been canceled without prejudice. It is, therefore, respectfully submitted that the rejection is moot with respect to claims 87 and 94 and it is respectfully requested that the rejection be withdrawn.

As previously asserted, independent claim 69 is allowable over Knutson. Therefore, it is respectfully asserted that claim 81 is also allowable over the cited reference at least by virtue of its dependence from allowable claim 69.

Claims 72, 76-78 and 89 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Knutson in view of Firmoff (U.S. Patent No. 6,958,781). This rejection is respectfully traversed.

With this paper, claim 89 has been canceled without prejudice. It is, therefore, respectfully submitted that the rejection is moot with respect to claim 89 and it is respectfully requested that the rejection be withdrawn.

It is respectfully submitted that Fimoff fails to cure the previously asserted deficiencies of Knutson with respect to coding supplemental data for first forward error correction (FEC), periodically inserting predefined sequences into the FEC-coded supplemental data and the predefined sequences are used to enhance ghost cancellation performance of the supplemental data in a channel equalizer of the DTV receiver, as recited in independent claim 69. Therefore, it is respectfully asserted that independent claim 69 is allowable over the cited combination of references and claims 70, 71, 73-75, 79 and 80 also are allowable over the cited combination of references at least by virtue of their dependence from allowable claim 69.

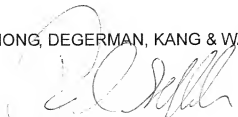
CONCLUSION

In view of the above remarks, Applicant submits that claims 69-81 and 96 of the present application are in condition for allowance. Reexamination and reconsideration of the application, as originally filed, are requested.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

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